

IN THE CLAIM

1. (Original) A pump for conveying a pumped fluid using a actuating fluid, the pump comprising a rigid outer casing defining an interior space, a tube structure accommodated in the interior space, the tube structure being flexible and substantially inelastic, the interior of the tube structure defining a pumping chamber for receiving pumped fluid, the tube structure being movable between laterally expanded and collapsed conditions for varying the volume of the pumping chamber thereby to provide discharge and intake strokes, tube structure being maintained in a taut condition between the ends thereof, the region of the interior space surrounding the tube structure defining an actuating region for receiving and accommodating actuating fluid, the pumping chamber being adapted to receive pumped fluid to cause the tube structure to move towards the expanded condition and the pumping chamber thereby undergoing an intake stroke, the pumping chamber undergoing a discharge stroke upon collapsing of the tube structure in response to the action of actuating fluid in the actuating region.

2. (Original) A pump according to claim 1 wherein one end of the tube structure is closed and the other end is connected to a port through which pumped fluid can enter into and discharge from the pumping chamber as the pumping chamber performs intake and discharge strokes.

3. (Currently Amended) A pump according to ~~claims 1 or 2~~ claim 1 wherein the tube structure is supported at the closed end thereof.

4. (Currently Amended) A pump according to ~~any one of claims 2 to 3~~ claim 2 wherein the closed end of the tube structure is movably supported to accommodate longitudinal extension and contraction of the tube structure.

5. (Currently Amended) A pump according to ~~any one of claims 2 to 6~~ claim 2 wherein the closed end of the tube structure is movably supported in any appropriate fashion such as by way of a spring mechanism.

6. (Currently Amended) A pump according to ~~any one of claims 2 to 5~~ claim 2 wherein the actuating region comprises a actuating annulus substantially surrounding the tube structure and a actuating chamber located at the closed end of the pump.

7. (Original) A pump according to claim 6 wherein the actuating annulus is in fluid communication with the actuating chamber.

8. (Currently Amended) A pump according to ~~any one of the preceding claims~~ claim 1 comprising means to bled fluid, such as air, from the pump.

9. (Original) A pump according to claim 8 comprising separate means to bled air from the pumping chamber and actuating region, wherein the air is bled from the pumping chamber during the intake stroke and air is bled from the actuating region during the discharge stroke.

10. (Currently Amended) A pump according to ~~any one of the preceding claims~~ claim 1 comprising a monitoring means to monitor the pump during the intake and discharge stroke.

11. (Original) A pump according to claim 10 wherein the monitoring means monitors the condition of the tube structure.

12. (Currently Amended) A pump according to ~~claim 10 or 11~~ claim 10 wherein the monitoring means monitors, directly or indirectly, the position of the closed end of the tube structure.

13. (Original) A pump according to claim 10 wherein the monitoring means monitors the pressure differential between components of the pump.

14. (Currently Amended) A pump according to ~~any one of claims 10 to 13~~ claim 10 wherein the monitoring means at least indicates when the discharge and intake strokes have

been completed.

15. (Currently Amended) A pumping system comprising a pump in accordance with ~~any one of claims 1 to 14~~ claim 1, a delivery means for delivering pumped fluid to the pumping chamber in timed sequence for causing the pumping chamber to undergo an intake stroke, and means for supplying actuating fluid to the actuating region in timed sequence to cause the tube structure to laterally collapse whereby the pumping chamber undergoes a discharge stroke.

16. (Original) A pumping system according to claim 15 wherein the delivery means comprises a delivery pump.

17. (Currently Amended) A pumping system ~~according to claim 15 or 16~~ claim 15 wherein the actuating fluid is of any appropriate form, such as hydraulic oil or water.

18. (Original) A pumping system according to claim 17 wherein the actuating fluid is hydraulic oil.

19. (Original) A pumping system according to claim 18 wherein the supply means includes a hydraulic circuit incorporating a reservoir for hydraulic oil and a hydraulic pump.

20. (Original) A pumping system according to claim 19 wherein the hydraulic circuit also includes an intake and exit valve system for regulating the delivery of hydraulic oil into, and the discharge of hydraulic oil from, the actuating region in timed sequence.

21. (Original) A pumping system according to claim 17 wherein the actuating fluid is water.

22. (Original) A pumping system according to claim 21 wherein the supply means comprise a water reservoir at an elevated location in order to supply the water at the

appropriate pressure head.

23. (Currently Amended) A pumping system according to ~~any one of claims 15 to 22~~ claim 15 wherein the delivery of the actuating fluid to the actuating region is at an opposed end to the port through which pumped fluid enters into and discharges from the pumping chamber.

24. (Currently Amended) A pumping system according to ~~any one of claims 15 to 23~~ claim 15 wherein the outlet of the actuating fluid from the actuating region is also at an opposed end to the port through which pumped fluid enters into and discharges from the pumping chamber.

25. (Currently Amended) A pumping system according to ~~any one of claims 15 to 24~~ claim 15 comprising two pumps ~~in accordance with claims 1 to 14~~ operating sequentially such that the pumping chamber of one pump performs an intake stroke while the pumping chamber of the other pump performs a discharge stroke, and vice versa.

26. (Original) A pumping system according to claim 25 wherein the sequential operation of the two pumps is such that a generally uninterrupted supply of pumped fluid is expelled from the pumping system.

27. (Currently Amended) A pumping system according to ~~claim 25 or 26~~ claim 25 wherein the duration of the discharge stroke is longer than the duration of the intake stroke.

28. (Currently Amended) A pumping system according to ~~claims 25, 26 or 27~~ claim 25 wherein one pump completes its intake stroke and commences its discharge stroke while the other pump is completing its discharge stroke.

29. (Currently Amended) A pumping system according to ~~any one of claims 25 to 28~~ claim 25 wherein the discharge stroke of one pump is completed by the time the discharge from the other pump is equal in flow to the desired flow of pump fluid from the

pumping system.

30. (Currently Amended) A pumping system according to ~~any one of claims 25 to 29~~ claim 25 wherein the two pumps have a common delivery means and a common supply means, with appropriate valve systems controlling the sequence of operation.

31. (Currently Amended) A pumping system according to ~~any one of claims 25 to 30~~ claim 25 wherein the or each pump is oriented so that the closed end of the tube structure is elevated in relation to the other end thereof.

32. (Currently Amended) A pumping system according to ~~any one of claims 25 to 31~~ claim 25 wherein the delivery and exit of the actuating fluid to the actuating region is adjacent the closed end.

33. (Original) A pump for conveying a pumped fluid using a actuating fluid, the pump comprising a rigid outer casing defining an interior space, a flexible tube structure accommodated in the interior space, the interior of the tube structure defining a pumping chamber for receiving pumped fluid, the tube structure being movable between laterally expanded and collapsed conditions for varying the volume of the pumping chamber thereby to provide discharge and intake strokes, one end of the tube structure being closed and the other end communicating with a port through which pumped fluid can enter into and discharge from the pumping chamber as the pumping chamber performs the intake and discharge strokes, the region of the interior space surrounding the tube structure defining an actuating region for receiving actuating fluid, the pumping chamber being adapted to receive pumped fluid to cause the tube structure to move towards the expanded condition and the pumping chamber thereby undergoing an intake stroke, the pumping chamber undergoing a discharge stroke upon collapsing of the tube structure in response to the action of actuating fluid in the actuating region.

34. (Original) A pump according to claim 33 wherein the tube structure is substantially inelastic.

35. (Currently Amended) A pump according to ~~claim 35 or 36~~ claim 35 wherein the port through which fluid enters the pumping chamber is at an opposed end to where the actuating fluid enters the pump.

36. (Original) A pumping system comprising at least two pumps each having a pumping chamber accommodated in an actuating region, a delivery means for delivering pumped fluid to each pumping chamber in timed sequence, causing each pumping chamber to undergo an intake stroke, and means for supplying actuating fluid to each actuating region in timed sequence to cause a respective tube structure of the pumping chamber to laterally collapse and the pumping chamber undergoing a discharge stroke, whereby the sequential operation of the at least two pumps expels a generally uninterrupted supply of pump fluid from the pumping system.

37. (Original) A pumping system according to claim 26 wherein each pumping chamber comprises a flexible and substantially inelastic tube structure.

38. (Currently Amended) A pumping system according to ~~claims 36 or 37~~ claim 36 wherein the pumping chamber has one end closed and the other end connected to a port through which pumped fluid can enter into and discharge from the pumping chamber as the pumping chamber performs intake and discharge strokes.

39. (Original) A pumping system according to claim 38 wherein the closed end of the pumping chamber is elevated in relation to the other end thereof.

40. (Currently Amended) A method of operating a pumping system in accordance with ~~any one of claims 36 to 39~~ claim 36 wherein the duration of the discharge stroke of one pump is longer than the duration of the intake stroke of the other pump, and vice versa, whereby, when operated sequentially, the pumping system delivers a generally uninterrupted supply of fluid.

41. (Original) A pump for conveying a pumped fluid using an actuating fluid, the

pump comprising a rigid outer casing defining an interior space, a tube structure accommodated in the interior space, the tube structure having one end closed and in an elevated position in relation to the other end, which communicates with a port through which pumped fluid can enter into and discharge from the pumping chamber, the interior of the tube structure defining a pumping chamber for receiving pumped fluid, the tube structure being movable between laterally expanded and collapsed conditions for varying the volume of the pumping chamber thereby to provide discharge and intake strokes, the region of the interior space surrounding the tube structure defining an actuating region for receiving actuating fluid, the pumping chamber being adapted to receive pumped fluid to cause the tube structure to move towards the expanded condition and the pumping chamber thereby undergoes an intake stroke, the pumping chamber undergoing a discharge stroke upon collapsing of the tube structure in response to the action of actuating fluid in the actuating region.

42. (Original) A pump according to claim 41 wherein the actuating fluid enters the actuating region adjacent the closed end of the pumping chamber.

43. (Currently Amended) A pump according to ~~claims 41 or 42~~ claim 41 wherein the tube structure is flexible and substantially inelastic.

44. (Cancelled).

45. (Cancelled).

46. (Cancelled).